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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,746

11/25/2003

Jae Chul Ryo

9988.084.00-US

3108

30827 7590 05/10/2007
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EXAMINER

RIGGLEMAN, JASON PAUL

ART UNIT

PAPER NUMBER

1746

MAIL DATE

DELIVERY MODE

05/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/720,746

Applicant(s)

RYO, JAE CHUL

Examiner

Jason P. Riggleman

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
7) ☒ Claim(s) 5 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 19 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/19/2007 have been fully considered but they are not persuasive. Current pending claims are 1-9. Claims 1-2 and 5 are amended. Claims 3-4 are original. Claims 6-9 are new.
2. In response to the applicant's arguments concerning the objection to the specification for failing to provide proper antecedent basis for the claimed subject matter -- original claims are not considered part of the specification (as the applicant maintains that they are) -- they are part of the disclosure. The purpose of the specification is to support the claims -- not vice-versa. Accordingly, the objection to the specification as failing to provide proper antecedent basis for claim 1 was proper but is withdrawn in view of the amendment to claim 1.
3. The 112 second paragraph rejection of claim 3 is withdrawn. The objection to the title is withdrawn. The 112 second paragraph rejection of claim 5 is withdrawn in view of the applicants amendment. The objection to the drawings is withdrawn.
4. Applicant's arguments filed 3/19/2007 have been fully considered but they are not persuasive in regards to the 102 (b) rejections of claims 1-4 by Billings et al. (US Patent No. 3078700). The applicant argues that the dewatering speed cannot be controlled if the dewatering operation does not occur (zero rpm dewatering speed).
5. The term "dewatering operation" is not included in the claims; therefore, the applicant's argument is moot. In any case, a "dewatering operation" can be defined as the point in the washing cycle when the temperature is being measured and the

controller spins the clothes (or does not) in accordance with the sensed draining water temperature. The dewatering speed is controlled to be either zero (reduced) or the "normal" dewatering speed.

Remarks

6. In regards to claims 3-4, when the dewatering speed is "limited" – for purposes of examination, limited is assumed to mean – a maximum speed of 1000 rpm or 700 rpm, (i.e, the dewatering speed may be any speed between zero and the limited speed).

7. Paragraph [0011] of the specification states the object of the invention lies in providing a washing machine control method in which the "water temperature is sensed prior to a final draining step to control a dewatering speed". This is contrary to the rest of the disclosure and is assumed to be a typographical error.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 6-7, and 9 are rejected under 35 U.S.C. 102(b) as being unpatentable by Billings et al. (US Patent No. 3078700).

9. Billings et al. teaches a washing machine control method comprising steps of supplying water to a tub for performing a final operational step, draining the water from the tub wherein the water temperature is sensed as it drains from the tub (Column 4, Lines 55-65). The washing machine has provisions for a variable temperature responsive system – a system which may be preset for the fabric to be washed and which will automatically prevent the spinning of the fabric so long as the temperature of the fabric remains above a particular (predetermined) threshold temperature (Columns

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3-4, Lines 69-75 and Lines 0-8, respectively). The temperature of wet fabric below which centrifuging will not cause "set-in" wrinkles is called the threshold temperature. The machine has a normal dewatering speed limited to 1,000 rpm (either 330 rpm or 850 rpm) and a reduced dewatering speed limited to 700 rpm (of zero rpm) (Column 7, Lines 0-12). Billings et al. teaches the predetermined temperature includes a plurality of referential water temperatures (is adjustable according to a reference temperature specific to the fabric type) (Column 3, Lines 69-75). The operational step is a final spin wash cycle – prior to the rinse cycle, Fig. 5 (Column 6, Lines 49-50). The dewatering speed is selected from a plurality of limiting dewatering speeds (zero or 850 rpm) with each of the dewatering speeds corresponding to a given temperature (Column 7, Lines 0-12)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Billings et al. (US Patent No. 3078700).

12. Billings et al. does not teach a final cycle being a rinsing cycle; however, Billings et al. suggests that it would be obvious to place the water temperature control (spin temperature thermostat 306) of the spinning operation at any point in the timer cycle (washing or rinsing cycles)(Column 6, Lines 54-60). It would have been obvious to one

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of ordinary skill in the art at the time of the invention to modify Billings et al. to create a temperature-controlled dewatering speed that reduces clothes wrinkling at any point in the cleaning process in which a centrifugation is performed (Column 3, Lines 62-65).

Allowable Subject Matter

13. Claim 5 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: Billings et al. does not teach or suggest a plurality of reduced dewatering speeds. Instead, Billings et al. teaches a method with one reduced speed (zero) if the sensed temperature is greater than the "threshold temperature".

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Riggleman whose telephone number is 571-272-5935. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JPR

Jason P Riggleman
Examiner
Art Unit 1746


MICHAEL BARR
SUPERVISORY PATENT EXAMINER